ARGO LAB M3-D

Digital glass ceramic hotplate magnetic stirrer

User manual

ARGO LAB

1 Warranty

Thank you for purchasing an instrument Argo Lab. This instrument is warranted under normal use for a period of 24 months from the date of purchase.

The warranty is valid only if the product is in original conditions. It does not apply to any product or parts of it that have been damaged due to incorrect installation, improper connections, improper use, accident or abnormal conditions of operation.

The manufacturer declines all responsibility for damage caused by failure to follow instructions, lack of maintenance and any unauthorized modification.

2 Safety instructions

	• Read the instructions carefully before use • Ensure that only qualified personnel using this tool • Do not heat flammable or highly volatile substances
	• Be very careful when you touch the heater plate. It can reach a temperature of 340 ° C. Pay attention even when the power has been turned off because the plate stays hot even longer.
	• Before use, make sure the instrument is connected to an outlet with a ground connection.

3 Controls

Items	Description
Speed control Knob Stir	The stirring function is switched ON or OFF by rotating the knob.
Temperature control knob Heat	The heating function is switched ON or OFF by rotating the knob.
LED	If rotate the heating knob, LED displays the temperature setting value and shift to real value in the duration of 5 seconds.
LED Heat	When the heating function is switched ON, the LED Heat flash.
LED Stir	When the instrument is switched ON, the LED Stir is lit.

4 Trial run

• Ensure that the mains voltage corresponds to the supply required.
• Make sure the wall outlet have a proper grounding.
• Make sure the power switch is turned off.
• Connect the network cable.
• Place the solution you want to mix in a bowl with the bar magnet.
• Place the container on the plate of the instrument.
• Set the stirring speed and let it go.
• Observe the bar magnet and the LCD display.
• Set the desired temperature and start to heat.
• Observe the actual temperature on the LCD.
• Stop stirring and heating.

If the above operations were carried out in a normal way, the device is ready for operation. Otherwise, the device may have been damaged during transport, please contact the manufacturer for technical support.

5 Work with external temperature probe

If the external temperature sensor is connected and the heating control knob is rotated, the display shows the set temperature and the actual value to vary in 5 seconds. An automatic comparison between the temperature of the plate and that detected by the

external probe allows a more precise control of the temperature of the sample.
If you need the external temperature probe, you should connect it before turning the instrument.
Make sure that the outside temperature sensor is properly connected and included in the sample before heating.

6 Maintenance and Cleaning

• A Proper maintenance of the instrument guarantees the condition and extend its life.
• Unplug the power cord before cleaning.
• When cleaning, be careful not to spray the cleaner inside the instrument.
• Use only mild detergent and do not contain abrasives.
• Before starting with any cleaning or decontamination, the user must ensure that the method used does not damage the instrument.
• Wear suitable protection when cleaning with chemicals
• If the instrument must be returned for service, it is necessary to provide for proper cleaning and possible decontamination by pathogens of the same. You should also put the instrument in its original packaging to send it to service center.

7 Associated standards and regulations

Construction in accordance with the following safety standards:
EN 61010-1
UL 3101-1
CAN/CSA C22.2(1010-1) EN 61010-2-10
Construction in accordance with the following EMC standards:
EN 61326-1
Associated EU guidelines:
EMC-guidelines: 89/336/EWG
Machine guidelines: 73/023/EWG

8 Technical datasheet

Voltage - Frequency	220V – 50/60Hz
Max stirring quantity (H2O)	10 litri
Max magnetic bar	80 mm
Speed range	0… 1.500 rpm
Speed indication	Digital display LCD
Hotplate material	Glass ceramic
Hotplate dimensions	184 x 184 mm
Power	1000 W
Heating rate	6 [°C/min]
Temnperature Range	RT to 550 °C
Temperature indication	Digital display LCD
Temperature display accuracy	1 °C
Control accuracy of heating temperature	0,5 °C
Safety temperature limit	580 °C
External temperature probe	PT1000
Control accuracy of heating temperature with external temperature probe	0,5 °C
Dimensions (W x D x H)	215×360×112 mm
Weight	4,5 kg
Permitted ambient temperature	5 ÷ 40 °C
Permitted relative humidity	80%
Protection class IP	IP21

9 Disposal

Information regarding the disposal of electrical and electronic equipment European Union.
Electrical and electronic equipment marked with the symbol on the side cannot be disposed of in landfills.

In accordance with EU Directive 2002/96/EC, the European users of electrical and electronic equipment have the opportunity to give back to the distributor or manufacturer upon purchase of a new one.
The illegal disposal of electrical and electronic equipment is punished with an administrative fine.